

Notice of Allowability	Application No.	Applicant(s)	
	09/924,140	OUYANG ET AL.	
	Examiner	Art Unit	
	Shawn S. An	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/09/05.
2. ☒ The allowed claim(s) is/are 17-32 and 39-40.
3. ☒ The drawings filed on 07 August 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>4/28/05, 2/18/05</u> 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|--|---|

EXAMINER'S AMENDMENT

1. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

IN THE CLAIMS:

A) Please cancel claim 38.

B) Please amend claims 17, 27, 30, and 39 as follows:

17. (Currently Amended) A DCT/IDCT circuit for enabling forward and inverse discrete cosine transform of a data block, comprising:

a plurality of cores, each having input data and output data,
wherein the input data includes external data and feedback
data output from selected ones of the cores, and wherein the
plurality of cores includes

a first core having a first input, a second input and an output
for performing forward DCT and IDCT operations, the
first input of the first core coupled to receive external
data;[, and]

a second core having a first input, a second input and an
output for performing forward DCT and IDCT
operations, the first input of the second core coupled
to receive external data, and the second input of the
second core coupled to the output of the first core ~~and~~
~~the output of the second core coupled to the second~~
~~input of the first core to provide feedback data;~~ and

a third core having a first input, a second input and an output for performing forward DCT and IDCT operations, the first input of the third core coupled to receive external data, the second input of the third core coupled to the output of the second core and the output of the third core coupled to the second input of the first core to provide feedback data.

27. (Currently Amended) A DCT circuit enabling forward discrete cosine transform of a data block, comprising:

a plurality of cores, each having input data and output data, wherein the input data includes external data and feedback data output from selected ones of the cores, and wherein the plurality of cores includes

a first core having a first input, a second input and an output for performing forward DCT operations, the first input of the first core coupled to receive external data, and

a second core having a first input, a second input and an output for performing forward DCT operations, the first input of the second core coupled to receive external data, the second input of the second core coupled to the output of the first core and the output of the second core coupled to the second input of the first core to provide feedback data; and

a third core having a first input, a second input and an output for performing forward DCT operations, the first input of the third core coupled to receive external data, the second input of the third core coupled to the output of the second core and the output of the third core coupled to the second input of the first core to provide feedback data.

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30. (Currently Amended) An IDCT circuit enabling inverse discrete cosine transform of a data block, comprising:

a plurality of cores, each having input data and output data,
wherein the input data includes external data and feedback data output from selected ones of the cores, and wherein the plurality of cores includes
a first core having a first input, a second input and an output for performing IDCT operations, the first input of the first core coupled to receive external data, and
a second core having a first input, a second input and an output for performing IDCT operations, the first input of the second core coupled to receive external data, the second input of the second core coupled to the output of the first core and the output of the second core coupled to the second input of the first core to provide feedback data; and
a third core having a first input, a second input and an output for performing IDCT operations, the first input of the third core coupled to receive external data, the second input of the third core coupled to the output of the second core and the output of the third core coupled to the second input of the first core to provide feedback data.

39. (Currently Amended) The DCT/IDCT circuit according to Claim [38]40, further including means for obtaining the final result within two clock cycles.

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REMARKS:

Claim 38 has been canceled, and claims 17, 27, 30, and 39 have been amended as discussed above, as authorized by Applicants' attorney, Greg Sueoka on June 24, 2005.

2. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S. An* whose telephone number is 571-272-7324.



**SHAWN AN
PRIMARY EXAMINER**

6/24/05

REASONS for ALLOWANCE

1. Claims 17-32 and 39 are allowed after entering the Examiner's Amendment as discussed in the EXAMINER'S AMENDMENT section.
2. Claim 40 is allowed as having the allowable subject matter as discussed in the last Office action as filed on 11/04/2004.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. The following is an Examiner's statement of reasons for allowance.

Claims 17-32 now recite novel features of DCT/IDCT circuit at least comprising a plurality of cores, each having input data and output data, wherein the input data includes external data and feedback data output from selected ones of the cores, and wherein the plurality of cores includes

a first core having a first input, a second input and an output for performing forward DCT and IDCT operations, the first input of the first core coupled to receive external data;

a second core having a first input, a second input and an output for performing forward DCT and IDCT operations, the first input of the second core coupled to receive external data, and the second input of the second core coupled to the output of the first core;
and

a third core having a first input, a second input and an output for performing forward DCT and IDCT operations, the first input of

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the third core coupled to receive external data, the second input of the third core coupled to the output of the second core and the output of the third core coupled to the second input of the first core to provide feedback data.

The prior art of records fail to anticipate or make obvious the novel features (emphasis added on underlined limitations) as discussed above.

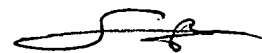
Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S. An* whose telephone number is 571-272-7324.

5. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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6/24/05